

ABSTRACT OF THE DISCLOSURE

[0058] A method of forming a metal layer on a substrate is disclosed. The metal layer is formed using a combined electrochemical plating/electrochemical mechanical polishing (ECP/EMP) process. In the ECP/EMP process, the metal layer is deposited on the substrate by contacting the substrate with a porous pad and then alternately applying a first electrical potential and a second electrical potential to an electrolyte plating solution. The first electrical potential functions to deposit metal on the substrate while the second electrical potential functions to remove metal from topographic portions thereof.